

Subject: Computer Science

Subject Leader: Owen Harding

Subject teachers: Jermaine Gordon

Department aims:

Birches Head Academy Computer Science Department aim is to help all students build their confidence in both the use of information technology and programming and to develop their logical thinking

Pupils

Through their lessons in computer science pupils will:

- Equip students in as many ways as possible to meet the technological and information centred challenges of a continually changing e-world.
- enjoy learning about the development in computing whilst exploring the rich history that has led to where technology is today
- develop an increased awareness of the importance computing plays on society and its members
- be encouraged to develop a logical mind in order to develop solutions to both mathematical and real word problems.

Staff

- promote a logical approach to problem solving
- develop interest and enthusiasm in computational thinking
- develop practical skills which may be transferable to other situations later in life
- encourage an awareness of the scope, limitations and costs of technological advancement.

KS3

In KS3 students follow a 3 module approach during each year. This is designed to prepare them and allow a greater understanding of what is required at GCSE.

Year 7:

Term 1	Term 2	Term 3
Using computers safely	Interactive Media r087	Intro to scratch
How to use Email		Hour of code
How Search engines work?		Game design

Year 8:

Term 1	Term 2	Term 3
Understanding computers	Photoshop r082	Flowcharts
Input output	How images are stored	Algorithm design
CPU	Bitmap images	Scratch game
Binary	Vector images	
Image storage	Compression –	
Storage devices	Resolution	

Year 9:

Term 1	Term 2	Term 3
Cyber security threats	Interactive Media r089	Pseudo code
Encryption	The digital divide	Python
Logic gates		Office skills –recap
Binary		
Networks		

KS4 (Years 10 & 11):

Students are covering OCR computer science course. This course consists of 2 papers. One around computer theory and the other programming. Students start off with system architecture and work their way through to ethical issues in year 1 and then go on to solve the currently non assessed but required 20 hour project in programming which leads into the skills required for paper 2

How can I help support my child's learning Science?

Students are encouraged to purchase revision guides sold in school, these can be used to revise both years 10 and 11.

Exam practise books are available for KS4.

Useful websites

BBCBITESIZE revision website is recommended for all year groups for additional research and revision activities

www.teach-ict.co.uk (we have a subscription)

youtube – csknow (Mr Hardings own revision channel)